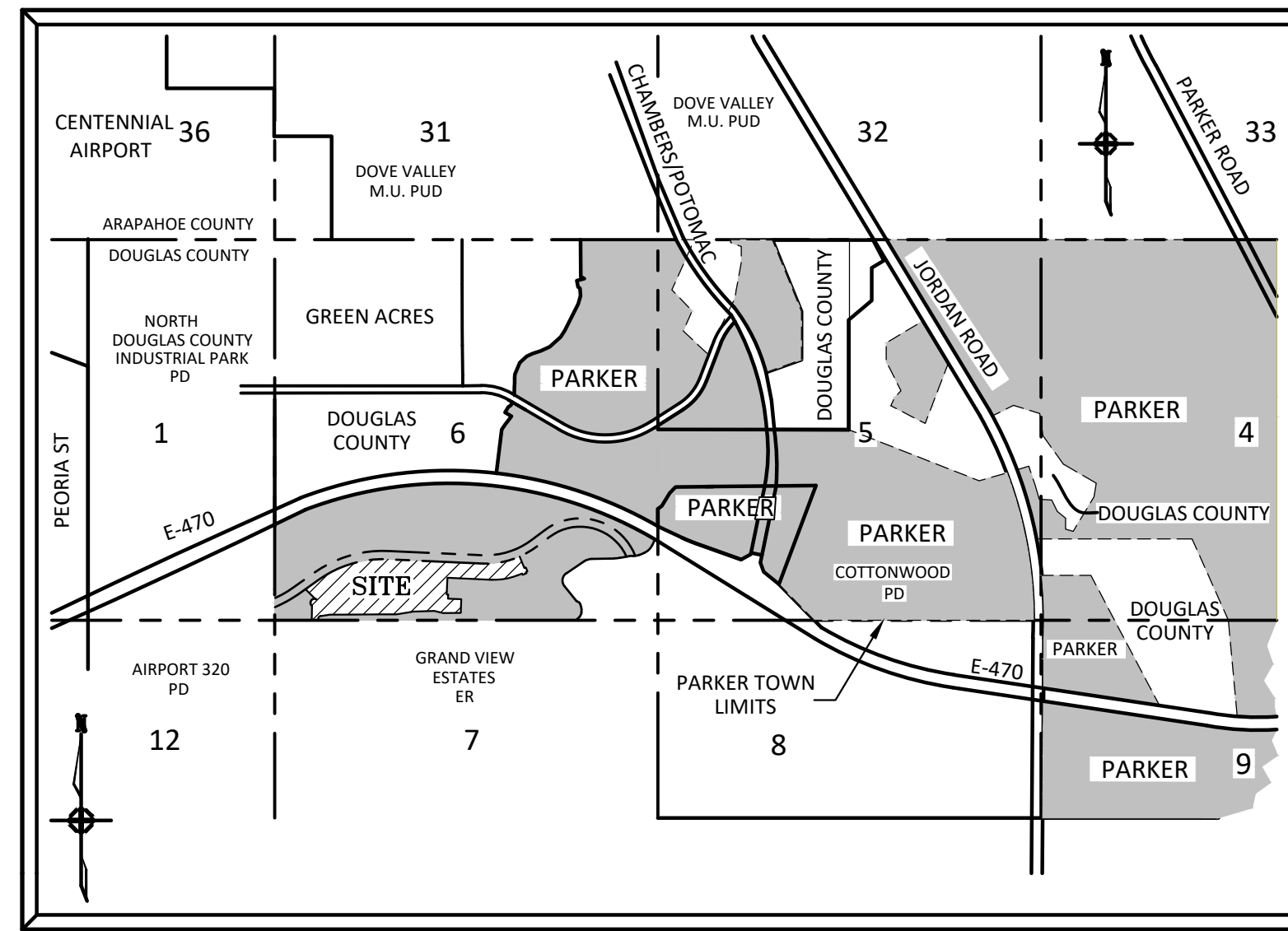


SVMD SANITARY SEWER AND WATER CONSTRUCTION PLANS FOR COMPARK VILLAGE SOUTH FILING NO. 2 PARKER, COLORADO

THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 6, TOWNSHIP 6 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN BEING MONUMENTED AS SHOWN HEREON HAVING A BEARING OF NORTH 00°29'49" WEST, AS DETERMINED BY GPS OBSERVATION FROM NGS CONTROL POINTS IN THE COLORADO CENTRAL ZONE, STATE PLANE COORDINATE SYSTEM TOWN OF PARKER, COUNTY OF DOUGLAS, STATE OF COLORADO

STONEGATE VILLAGE METRO DISTRICT WATER AND SANITARY SEWER PLAN



VICINITY MAP
N.T.S.

WATER MAIN QUANTITIES

1	8" PVC Water Main	2,581	L.F.
2	8" Gate Valve and Box	20	Each
3	8" x 6" Tee w/ Kick Block	15	Each
4	8" x 8" Cross w/ KB	1	Each
5	8" x 8" Tee w/ KB	3	Each
6	8" Plug w/ BO & KB	3	Each
7	8" 11.25 Degree Bend	1	Each
8	8" 22.5 Degree Bend w/ 8"x6" Reducer & Kick Block	1	Each
9	8" Water Main Lowering	5	Each
10	6" PVC Water Main	1,969	L.F.
11	6" Gate Valve and Box	10	Each
12	6" Plug w/ BO & KB	10	Each
13	6" Water Main Lowering	3	Each
14	Fire Hydrant Assembly	6	Each
15	5' Manhole	1	Each
16	6" Check Valve	1	Each
17	6" Turbine Meter	1	Each
18	Remove Existing 8" Plug and Make Dry Connection	3	Each

SANITARY SEWER MAIN QUANTITIES

1	8" Sanitary Sewer Main (0-16' Depth)	3,686	L.F.
2	4' Diameter Manholes (0-20' Depth)	22	Each
3	8" Plug	2	Each
4	Connection to Existing Sanitary Sewer	1	Each

I HEREBY AFFIRM THAT THESE CONSTRUCTION PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION.

FOR AND ON BEHALF OF MANHARD CONSULTING



8008 E. Arapahoe Court, Suite 110, Centennial, CO 80112 | ph:303.708.0500 | fx:303.708.0400 | manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

AGENCY CONTACT LIST

470 COMPARK, LLC
MICHAEL VICKERS
1001 BANNOCK STREET, SUITE #240
DENVER, CO 80204 303-881-6292

MANHARD CONSULTING
RICK J. MOORE, P.E.
8008 E ARAPAHOE COURT, SUITE 110
CENTENNIAL, CO 80112 303-708-0500

PARKER PUBLIC WORKS
20120 E. MAINSTREET
PARKER, CO. 80138 303-840-9546
STREETS - ALEX MESTDAGH
STORM WATER - JACOB JAMES
EROSION CONTROL - KURT PATRICK
LIFE SAFETY - RANDY CARPRA

TOWN OF PARKER POLICE DEPARTMENT
19600 E. PARKER SQUARE DR.
PARKER, CO. 80134 303-841-9800

PARKER BUILDING DEPT
20120 E. MAINSTREET
PARKER, CO. 80138 303-805-3169
LIFE SAFETY - RANDY CAPRA

STONEGATE VILLAGE METROPOLITAN DISTRICT
DISTRICT ENGINEER:
SCOTT BARNETT 303-649-9857
MULHERN MRE, INC.
188 INVERNESS DRIVE WEST, SUITE 150
ENGLEWOOD, CO 80112 303-858-9909

DISTRICT MANAGER:
PAUL DANIELS
10252 STONEGATE PARKWAY
PARKER, CO 80134 303-858-9909

SOUTH METRO FIRE RESCUE AUTHORITY
MICHELLE HERIAN
9195 E. MINERAL AVE.
CENTENNIAL, CO 80112 720-488-7200

UTILITY NOTIFICATION COMPANY OF COLORADO
2801 SOUTH YOUNGFIELD ST, SUITE 301
GOLDEN, CO 80401 1-800-922-1987
LOCAL CALLS (811)

XCEL ENERGY
MICHELLE O'NAN
5909 E. 38TH AVE.
DENVER, CO 80207 303-329-1618

QWEST
WILLIAM BENSON
9750 E. COSTILLA AVE.
ENGLEWOOD, CO 80112 720-490-3867

COMCAST
KEVIN YOUNG
6850 S. TUCSON WAY
ENGLEWOOD, CO 80112 303-792-6069

COLORADO DEPARTMENT OF HEALTH
4210 E. 11TH AVE.
DENVER, CO 80220 303-320-8333

INTERMOUNTAIN RURAL ELECTRIC ASSOCIATION
BROOKS KAUFMAN
5496 NORTH US HWY 85
P.O. BOX DRAWER A
SEDALIA, CO 80135 303-688-3100

BENCHMARKS: (COMPARK SOUTH)

SOURCE BENCHMARKS:
DOUGLAS COUNTY BM 1.115010
A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF THE CENTERLINE OF COMPARK BOULEVARD.
ELEVATION = 5752.84 (NAVD 88)

SITE BENCHMARKS:
1. A NO. 5 REBAR WITH 2" ALUMINUM CAP STAMPED "LS 28286, 2001" FOUND AT THE SOUTHEAST CORNER OF SECTION 6, T6S, R66W LOCATED ON THE WEST LINE OF FIRST STREET APPROXIMATELY 1000 FEET NORTH OF ELM AVENUE.
ELEVATION = 5845.51

2. A 2.5" IRON PIPE WITH 3.25" ALUMINUM CAP STAMPED "PLS 12405, 1997" FOUND AT THE SOUTHEAST CORNER OF SECTION 6, T6S, R66W LOCATED APPROXIMATELY 960 FEET NORTH OF THE CENTERLINE OF AVENTERRA PARKWAY AND APPROXIMATELY 1050 FEET WEST OF THE CENTERLINE OF CHAMBERS ROAD.
ELEVATION = 5808.06



Know what's below.
Call before you dig.

SHEET INDEX - SVD DISTRICT PLAN SET

SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	GENERAL NOTES
3	OVERALL UTILITY PLAN
4	WATER PLAN - WEST
5	WATER PLAN - EAST
6	SANITARY SEWER PLAN AND PROFILE - DEERTRACK LANE
7	SANITARY SEWER PLAN AND PROFILE - DEERTRACK LANE
8	SANITARY SEWER PLAN AND PROFILE - RACCOON TAIL WAY
9	SANITARY SEWER PLAN AND PROFILE - ALLEY 1-3
10	SANITARY SEWER PLAN AND PROFILE - ALLEY 4-6
11	SANITARY SEWER PLAN AND PROFILE - ALLEY 7-9
12	SANITARY SEWER CONSTRUCTION DETAILS
13	WATER SYSTEM CONSTRUCTION DETAILS
14	WATER SYSTEM CONSTRUCTION DETAILS

TOWN OF PARKER BUILDING DEPT FIRE LIFE SAFETY APPROVAL

ALL FIRE HYDRANTS SHALL BE INSTALLED ACCORDING TO WATER UTILITY STANDARDS. THE NUMBER AND LOCATIONS OF THE FIRE HYDRANTS AS SHOWN ON THE OVERALL UTILITY PLAN ARE CORRECT AS SPECIFIED BY THE TOWN OF PARKER, COMMUNITY DEVELOPMENT DEPARTMENT.

BY: _____

(SIGNATURE OF FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE)

DATE SIGNED _____

NOTE: UNDERGROUND FIRE LINE (UFL) SUBMITTAL DOCUMENTS MUST MEET THE REQUIREMENTS OF NFPA 24 WHEN SUBMITTING FOR REVIEW

DISTRICT APPROVALS

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APPROVED FOR CONSTRUCTION WITHIN ONE YEAR OF THE EARLIEST OF THESE DATES:

BY _____ DATE _____
STONEGATE VILLAGE METROPOLITAN DISTRICT ENGINEER

BY _____ DATE _____
STONEGATE VILLAGE METROPOLITAN DISTRICT MANAGER

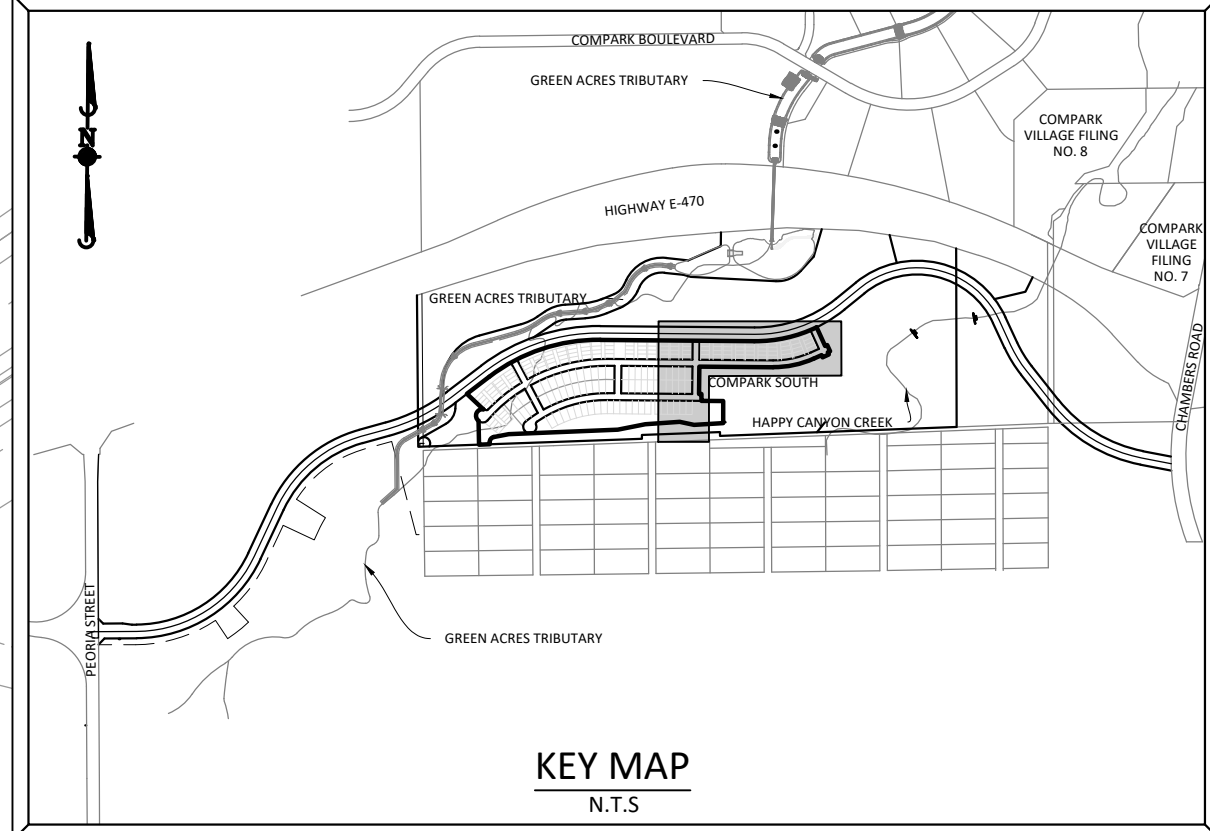
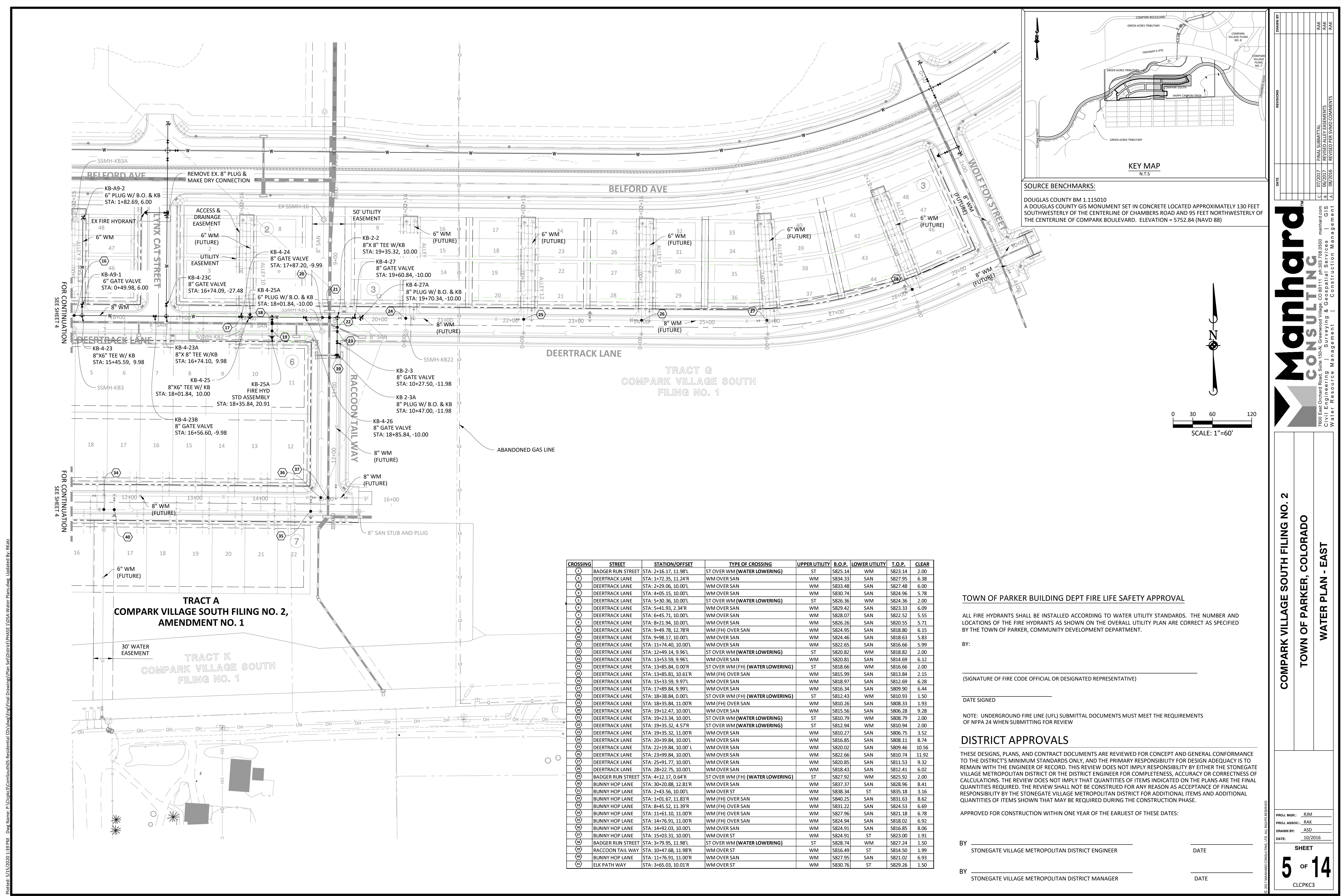
DATE	REVISIONS
C 07/2017	FINAL SUBMITTAL
B 06/2017	REVISED ALLEY EASEMENTS
A 08/2016	REVISED PER SVMD COMMENTS



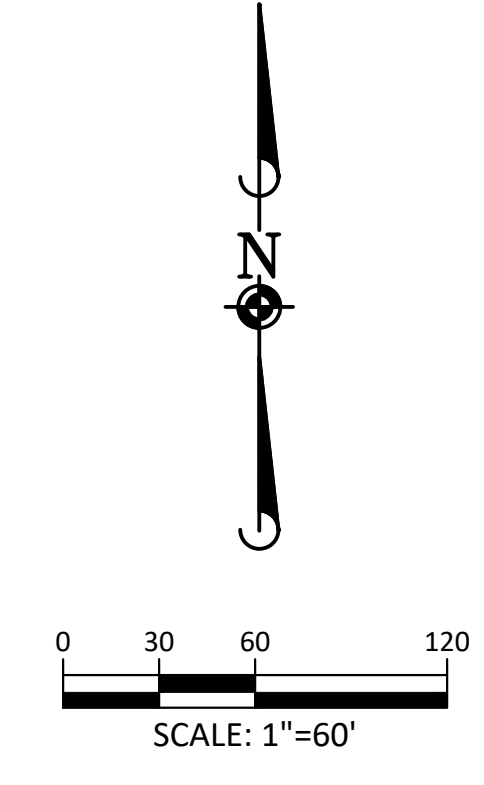
COMPARK VILLAGE SOUTH FILING NO. 2
TOWN OF PARKER, COLORADO
COVER SHEET

PROJ. MGR.: RJM
PROJ. ASSOC.: RAK
DRAWN BY: ASD
DATE: 10/2016

SHEET
1 OF 14
CLCPK3



SOURCE BENCHMARKS:
 DOUGLAS COUNTY BM 1.115010
 A DOUGLAS COUNTY GIS MONUMENT SET IN CONCRETE LOCATED APPROXIMATELY 130 FEET
 SOUTHWESTERLY OF THE CENTERLINE OF CHAMBERS ROAD AND 95 FEET NORTHWESTERLY OF
 THE CENTERLINE OF COMPARK BOULEVARD. ELEVATION = 5752.84 (NAVD 88)



CROSSING	STREET	STATION/OFFSET	TYPE OF CROSSING	UPPER UTILITY	B.O.P.	LOWER UTILITY	T.O.P.	CLEAR
(1)	BADGER RUN STREET	STA: 2+16.17, 11.98'L	ST OVER WM (WATER LOWERING)	ST	5825.14	WM	5823.14	2.00
(2)	DEERTRACK LANE	STA: 1+72.35, 11.24'R	WM OVER SAN	WM	5834.33	SAN	5827.95	6.38
(3)	DEERTRACK LANE	STA: 2+29.06, 10.00'L	WM OVER SAN	WM	5833.48	SAN	5827.48	6.00
(4)	DEERTRACK LANE	STA: 4+05.15, 10.00'L	WM OVER SAN	WM	5830.74	SAN	5824.96	5.78
(5)	DEERTRACK LANE	STA: 5+30.36, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5826.36	WM	5824.36	2.00
(6)	DEERTRACK LANE	STA: 5+41.93, 2.34'R	WM OVER SAN	WM	5829.42	SAN	5823.33	6.09
(7)	DEERTRACK LANE	STA: 6+45.71, 10.00'L	WM OVER SAN	WM	5828.07	SAN	5822.52	5.55
(8)	DEERTRACK LANE	STA: 8+21.94, 10.00'L	WM OVER SAN	WM	5826.26	SAN	5820.55	5.71
(9)	DEERTRACK LANE	STA: 9+49.78, 12.78'R	WM (FH) OVER SAN	WM	5824.95	SAN	5818.80	6.15
(10)	DEERTRACK LANE	STA: 9+98.17, 10.00'L	WM OVER SAN	WM	5824.46	SAN	5818.63	5.83
(11)	DEERTRACK LANE	STA: 11+74.40, 10.00'L	WM OVER SAN	WM	5822.65	SAN	5816.66	5.99
(12)	DEERTRACK LANE	STA: 12+49.14, 9.96'L	ST OVER WM (WATER LOWERING)	ST	5820.82	WM	5818.82	2.00
(13)	DEERTRACK LANE	STA: 13+53.59, 9.96'L	WM OVER SAN	WM	5820.81	SAN	5814.69	6.12
(14)	DEERTRACK LANE	STA: 13+85.84, 0.00'R	ST OVER WM (FH) (WATER LOWERING)	ST	5818.66	WM	5816.66	2.00
(15)	DEERTRACK LANE	STA: 13+85.81, 10.61'R	WM (FH) OVER SAN	WM	5815.99	SAN	5813.84	2.15
(16)	DEERTRACK LANE	STA: 15+33.59, 9.97'L	WM OVER SAN	WM	5818.97	SAN	5812.69	6.28
(17)	DEERTRACK LANE	STA: 17+89.84, 9.99'L	WM OVER SAN	WM	5816.34	SAN	5809.90	6.44
(18)	DEERTRACK LANE	STA: 18+38.84, 0.00'L	ST OVER WM (FH) (WATER LOWERING)	ST	5812.43	WM	5810.93	1.50
(19)	DEERTRACK LANE	STA: 18+35.84, 11.00'R	WM (FH) OVER SAN	WM	5810.26	SAN	5808.33	1.93
(20)	DEERTRACK LANE	STA: 19+12.47, 10.00'L	WM OVER SAN	WM	5815.56	SAN	5806.28	9.28
(21)	DEERTRACK LANE	STA: 19+23.34, 10.00'L	ST OVER WM (WATER LOWERING)	ST	5810.79	WM	5808.79	2.00
(22)	DEERTRACK LANE	STA: 19+35.32, 4.57'R	ST OVER WM (WATER LOWERING)	ST	5812.94	WM	5810.94	2.00
(23)	DEERTRACK LANE	STA: 19+35.32, 11.00'R	WM OVER SAN	WM	5810.27	SAN	5806.75	3.52
(24)	DEERTRACK LANE	STA: 20+39.84, 10.00'L	WM OVER SAN	WM	5816.85	SAN	5808.11	8.74
(25)	DEERTRACK LANE	STA: 22+19.84, 10.00'L	WM OVER SAN	WM	5820.02	SAN	5809.46	10.56
(26)	DEERTRACK LANE	STA: 23+99.84, 10.00'L	WM OVER SAN	WM	5822.66	SAN	5810.74	11.92
(27)	DEERTRACK LANE	STA: 25+91.77, 10.00'L	WM OVER SAN	WM	5820.85	SAN	5811.53	9.32
(28)	DEERTRACK LANE	STA: 28+22.75, 10.00'L	WM OVER SAN	WM	5818.43	SAN	5812.41	6.02
(29)	BADGER RUN STREET	STA: 4+12.17, 0.64'R	ST OVER WM (FH) (WATER LOWERING)	ST	5827.92	WM	5825.92	2.00
(30)	BUNNY HOP LANE	STA: 30+20.88, 12.81'R	WM OVER SAN	WM	5837.37	SAN	5828.96	8.41
(31)	BUNNY HOP LANE	STA: 2+43.56, 10.00'L	WM OVER ST	WM	5838.34	ST	5835.18	3.16
(32)	BUNNY HOP LANE	STA: 1+01.67, 11.83'R	WM (FH) OVER SAN	WM	5840.25	SAN	5831.63	8.62
(33)	BUNNY HOP LANE	STA: 8+45.52, 11.39'R	WM (FH) OVER SAN	WM	5831.22	SAN	5824.53	6.69
(34)	BUNNY HOP LANE	STA: 11+61.10, 11.00'R	WM (FH) OVER SAN	WM	5827.96	SAN	5821.18	6.78
(35)	BUNNY HOP LANE	STA: 14+76.91, 11.00'R	WM (FH) OVER SAN	WM	5824.94	SAN	5818.02	6.92
(36)	BUNNY HOP LANE	STA: 14+92.03, 10.00'L	WM OVER SAN	WM	5824.91	SAN	5816.85	8.06
(37)	BUNNY HOP LANE	STA: 15+03.31, 10.00'L	WM OVER ST	WM	5824.91	ST	5823.00	1.91
(38)	BADGER RUN STREET	STA: 3+79.95, 11.98'L	ST OVER WM (WATER LOWERING)	ST	5828.74	WM	5827.24	1.50
(39)	RACCOON TAIL WAY	STA: 10+47.68, 11.98'R	WM OVER ST	WM	5816.49	ST	5814.50	1.99
(40)	BUNNY HOP LANE	STA: 11+76.91, 11.00'R	WM OVER SAN	WM	5827.95	SAN	5821.02	6.93
(41)	ELK PATH WAY	STA: 3+65.03, 10.01'R	WM OVER ST	WM	5830.76	ST	5829.26	1.50

TOWN OF PARKER BUILDING DEPT FIRE LIFE SAFETY APPROVAL

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BY: _____
 (SIGNATURE OF FIRE CODE OFFICIAL OR DESIGNATED REPRESENTATIVE)

DATE SIGNED _____

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BY _____ DATE _____
 STONEGATE VILLAGE METROPOLITAN DISTRICT ENGINEER

BY _____ DATE _____
 STONEGATE VILLAGE METROPOLITAN DISTRICT MANAGER

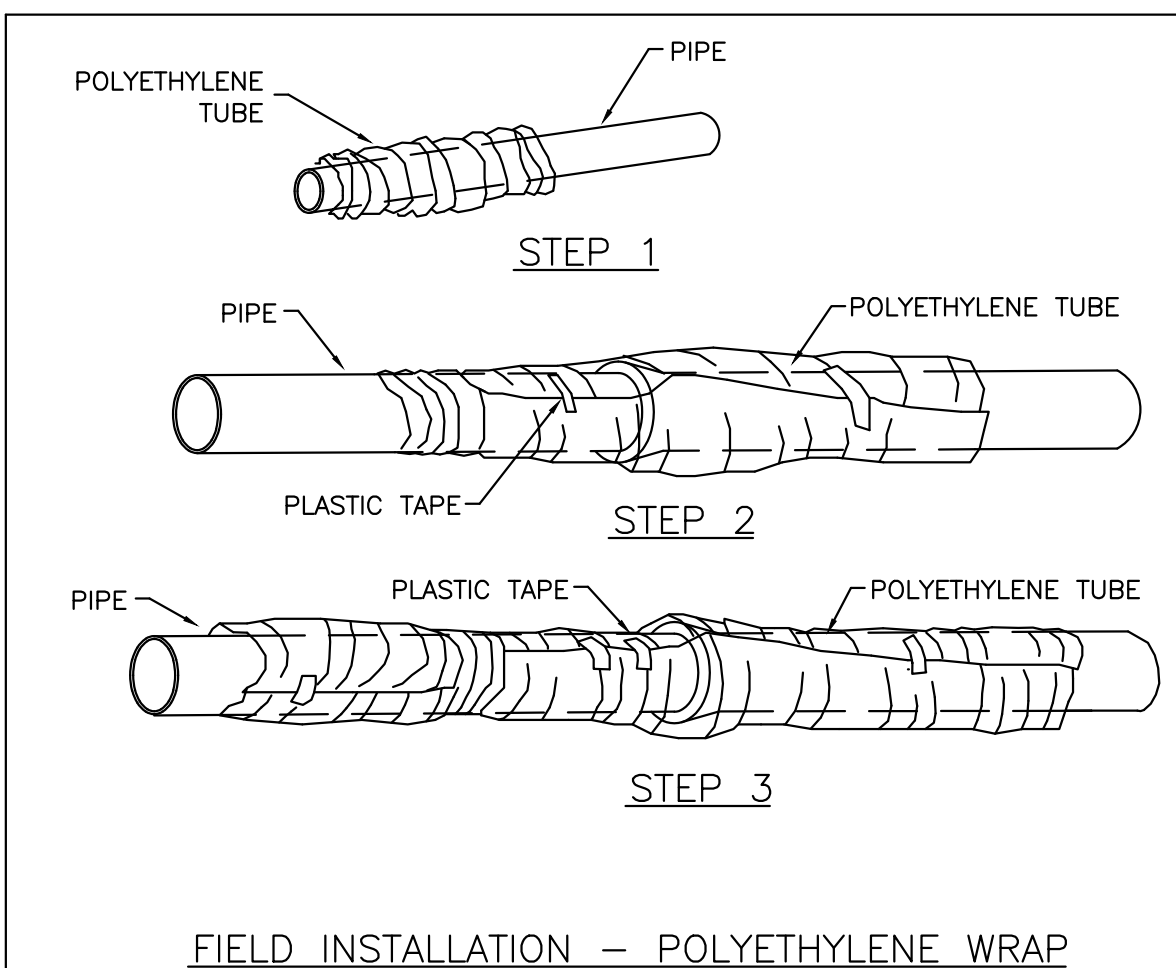
DATE	REVISIONS
07/2017 <td>FINAL SUBMITTAL</td>	FINAL SUBMITTAL
06/2017 <td>REVISED ALLEY EASEMENTS</td>	REVISED ALLEY EASEMENTS
08/2016 <td>REVISED PER SWMD COMMENTS</td>	REVISED PER SWMD COMMENTS

Manhard CONSULTING
 7600 East Orchard Road, Suite 100-A, Greenwood Village, CO 80111 | phone: 703.0500 | manhard.com
 Civil Engineering | Surveying & Geospatial Services | GIS | Construction Management | Water Resource Management

COMPARK VILLAGE SOUTH FILING NO. 2
TOWN OF PARKER, COLORADO
WATER PLAN - EAST

Plotted: 5/15/2020 1:39 PM. Dwg Name: P:\CLCPK3\Compark3\Residential\CD\Drawings\Final\Drawings\Plan Set\District\PHASE 1\USA-Water Plans.dwg. Updated By: RIGZ

Printed: 5/15/2020 1:51 PM. Dwg Name: P:\C\c3\Compark3\Compark3\Drawings\Phase 1\ISA-WATER DETAILS.dwg. Updated By: RJK



FIELD INSTALLATION - POLYETHYLENE WRAP

STEP 1 - PLACE TUBE OF POLYETHYLENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO TRENCH.

STEP 2 - PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.

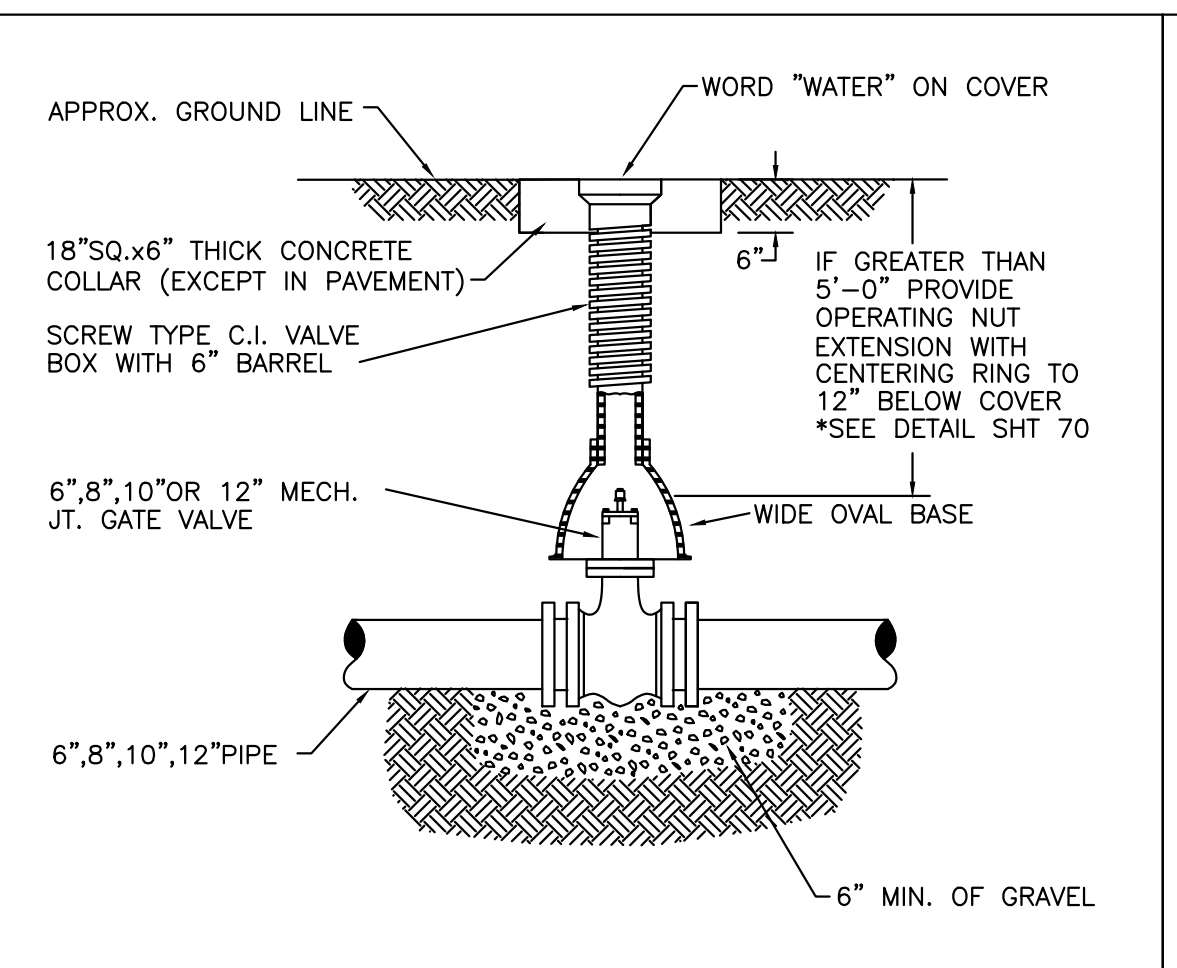
STEP 3 - OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

STONEGATE VILLAGE METROPOLITAN DISTRICT

POLYETHYLENE WRAP

SCALE: NONE DATE: 4/00

APPROVED: RJK DISTRICT ENGINEER



6-INCH VALVE BOXES

Materials:
Valve box parts shall be made from gray cast iron, ASTM A48 Class 20A. Use of an aluminum alloy as a casting material is not acceptable.

Approved Patterns:
Valve boxes shall be the three-piece adjustable screw type and the following two patterns are acceptable.

- Tyler screw-type 6-inch cast iron valve box assembly series 6860 with No. 160 oval base.
- Clay and Bailey screw-type 6-inch cast iron valve box assembly No. P-108 with No. 160 large oval base.

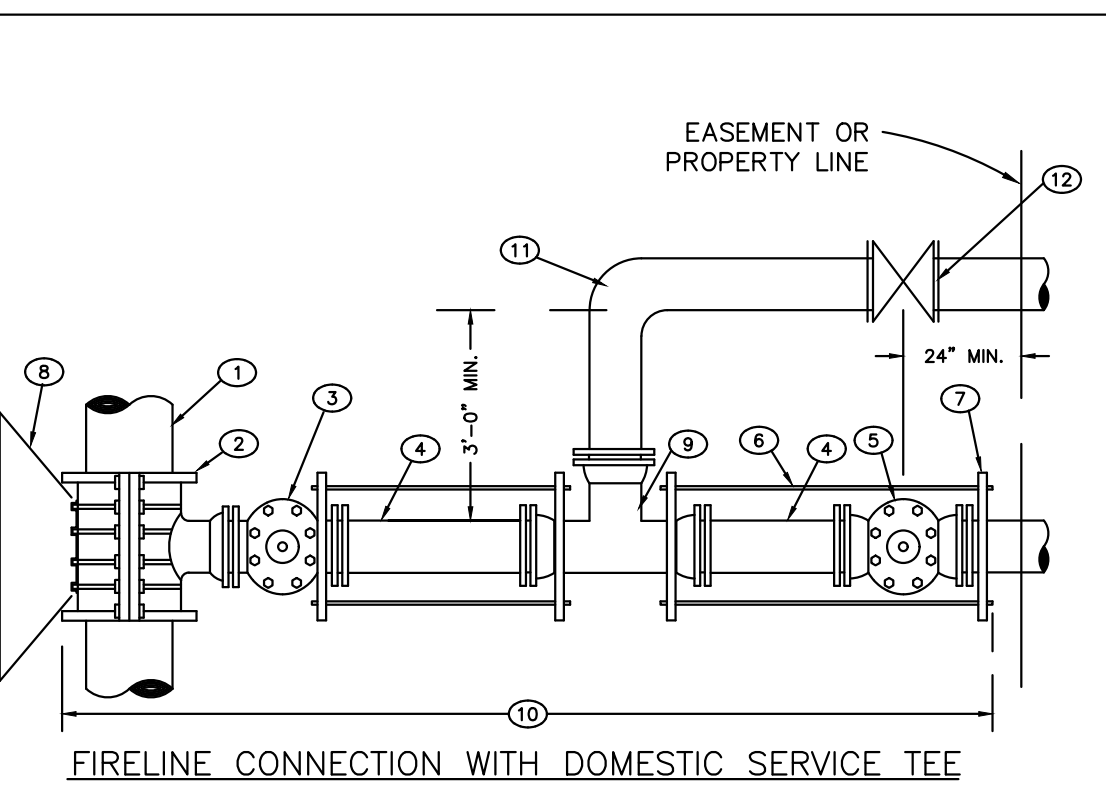
NOTES:
1. VALVE BOXES SHALL BE:
A. TYLER SCREW-TYPE 6\"/>

STONEGATE VILLAGE METROPOLITAN DISTRICT

VALVE BOX DETAIL

SCALE: NONE DATE: 4/00

APPROVED: RJK DISTRICT ENGINEER



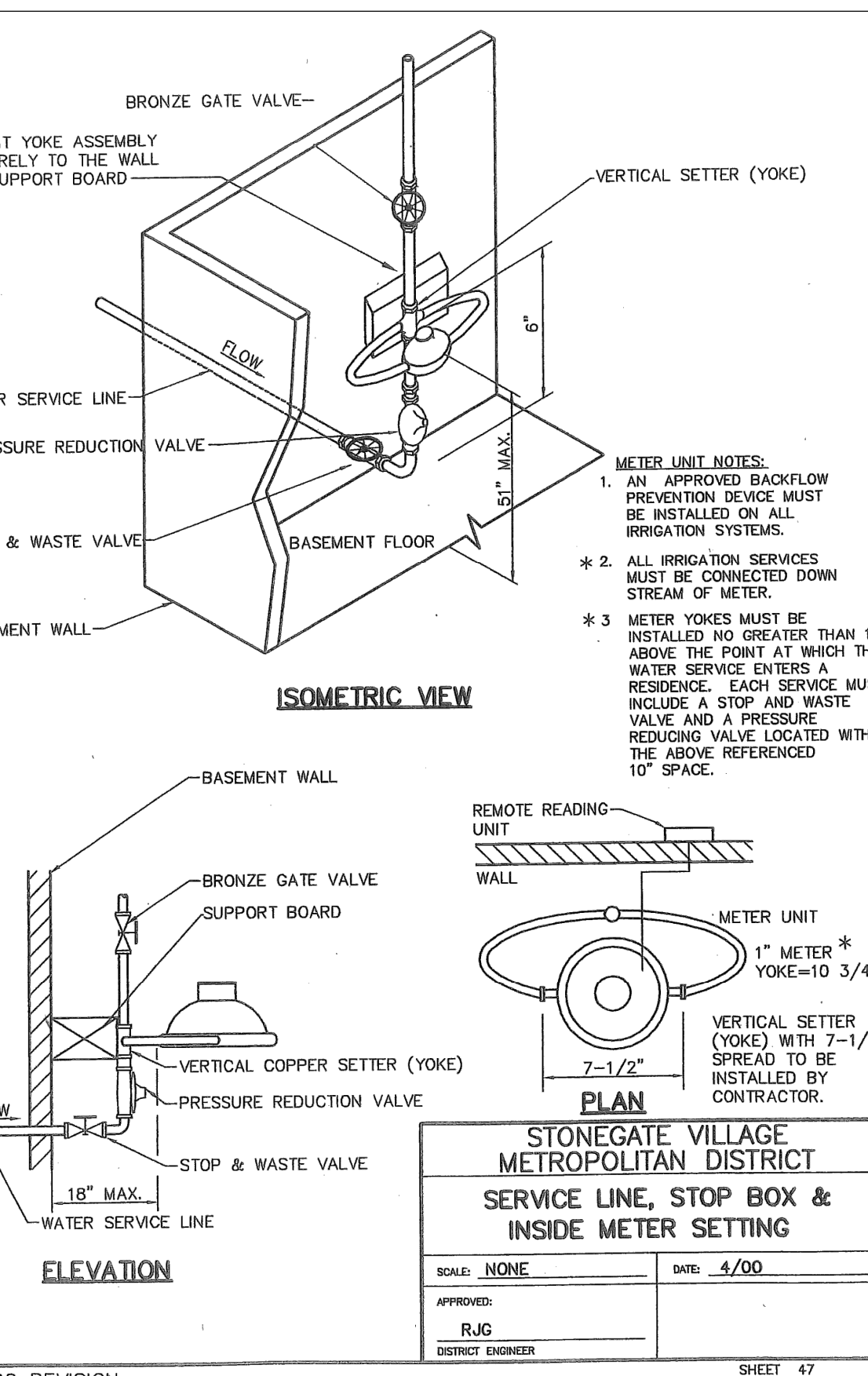
COMMERCIAL AND MULTI-FAMILY USE ONLY

STONEGATE VILLAGE METROPOLITAN DISTRICT

COMBINATION FIRE/SERVICE TAP

SCALE: NONE DATE: 4/00

APPROVED: RJK DISTRICT ENGINEER



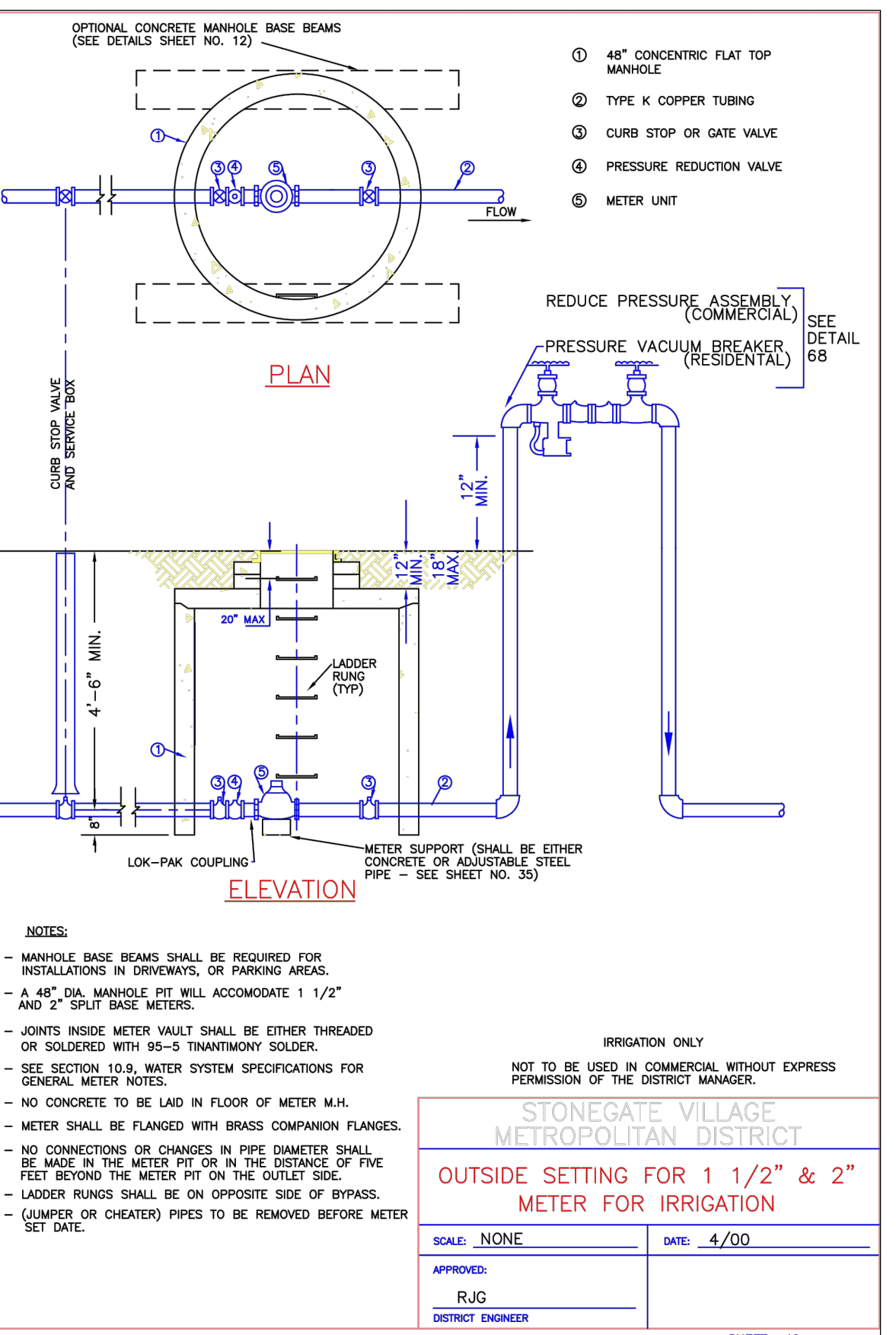
2000 REVISION

STONEGATE VILLAGE METROPOLITAN DISTRICT

REMOTE READING 3/4" & 1" METER TYPICAL INSIDE SETTING

SCALE: NONE DATE: 4/00

APPROVED: RJK DISTRICT ENGINEER



2000 REVISION

STONEGATE VILLAGE METROPOLITAN DISTRICT

OUTSIDE SETTING FOR 1 1/2" & 2" METER FOR IRRIGATION

SCALE: NONE DATE: 4/00

APPROVED: RJK DISTRICT ENGINEER

LENGTH OF TIED PIPE

PIPE SIZE	4"	6"	8"	10"	12"	16"	20"	24"	
TEE OR VALVE	3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S.	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00
50' BEND	3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S.	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00
45' BEND	3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S.	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00
22-1/2' BEND	3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S.	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00
11-1/4' BEND	3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S. 3/4" M.S.	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00	13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00 13.00

NOTES:
1. LENGTH OF TIED PIPE MEASURED EACH WAY FROM VALVES AND BENDS.
2. CLAMPS AND RODS NOT ALLOWED FOR 24" AND LARGER PIPES.
3. P.C. TAPPING STRONGTIGHT, C = GRADE, M.S. = MILD STEEL.
4. MINIMUM 4.5' GROUND COVER REQUIRED.
5. BASED ON 150 PSI INTERNAL PRESSURE.
6. M.S. MEANS MILD STEEL ROD A.S.T.M. STANDARD DESIGNATION A-36.
7. A-183 GRADE B7-2.
8. NUTS SHALL BE A.S.T.M. STANDARD DESIGNATION A-307 GRADE A OR B HEXAGON HEAVY SERIES.
9. SEE IF ROD BEING DRAWN, ALSO SEE TAPPING AND ROD COUPLING DETAILS.
10. LENGTH REFERS TO THE AMOUNT OF PIPE WHICH MUST BE TIED TOGETHER AND IS NOT NECESSARILY THE LENGTH OF THE RODS.
11. STAR BOLTS NOT ALLOWED ON PIPE LARGER THAN 16".
12. MINIMUM OF 4 RODS REQUIRED ON 16" PIPE IF STAR BOLTS ARE USED.
13. TEES ARE TO BE ROODED ON BRANCH ONLY.
14. ALL VALVES TO BE ROODED IN BOTH DIRECTIONS.

STONEGATE VILLAGE METROPOLITAN DISTRICT

LENGTH OF TIED PIPE

SCALE: NONE DATE: 4/00

APPROVED: RJK DISTRICT ENGINEER

PIPE BEDDING

(c) Installation of Bedding and Pipe: After completion of the trench excavation and proper preparation of the foundation, six inches (6") of bedding material shall be placed on the trench bottom for support under the pipe. Bed holes shall be dug deep enough to provide a minimum of two inches (2") of clearance between the soil and bedding material. All pipe shall be installed in such a manner as to insure full support of the pipe barrel over its entire length. After the pipe is adjusted for line and grade, and the joint is made, the bedding material shall be carefully placed and tamped under the haunches of the pipe and in the previously dug bed holes.

The limits of bedding shall be from six inches (6") below the bottom of the pipe to twelve inches (12") above the top of the pipe. Approved backfill may then be installed to the groundline. See Section 6 of these Standards for backfill and composition of backfill.

Completion of bedding is not required. The only requirement is sufficient tamping to achieve uniform support under the pipe. See Sheet 8 of the Standards Drawings for a typical trench cross section.

(d) Bedding Material: The bedding material shall be a clean well-graded sand or squeegee sand and shall conform to the following limits when tested by means of laboratory sieves:

Well-Graded Sand	
Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 4	85-100
No. 8	80-100
No. 16	50-85
No. 30	20-60
No. 60	10-30
No. 100	2-10
No. 200	0

Squeegee Sand	
Sieve Size	Total Percent Passing by Weight
3/8 inch	100
No. 100	0-5

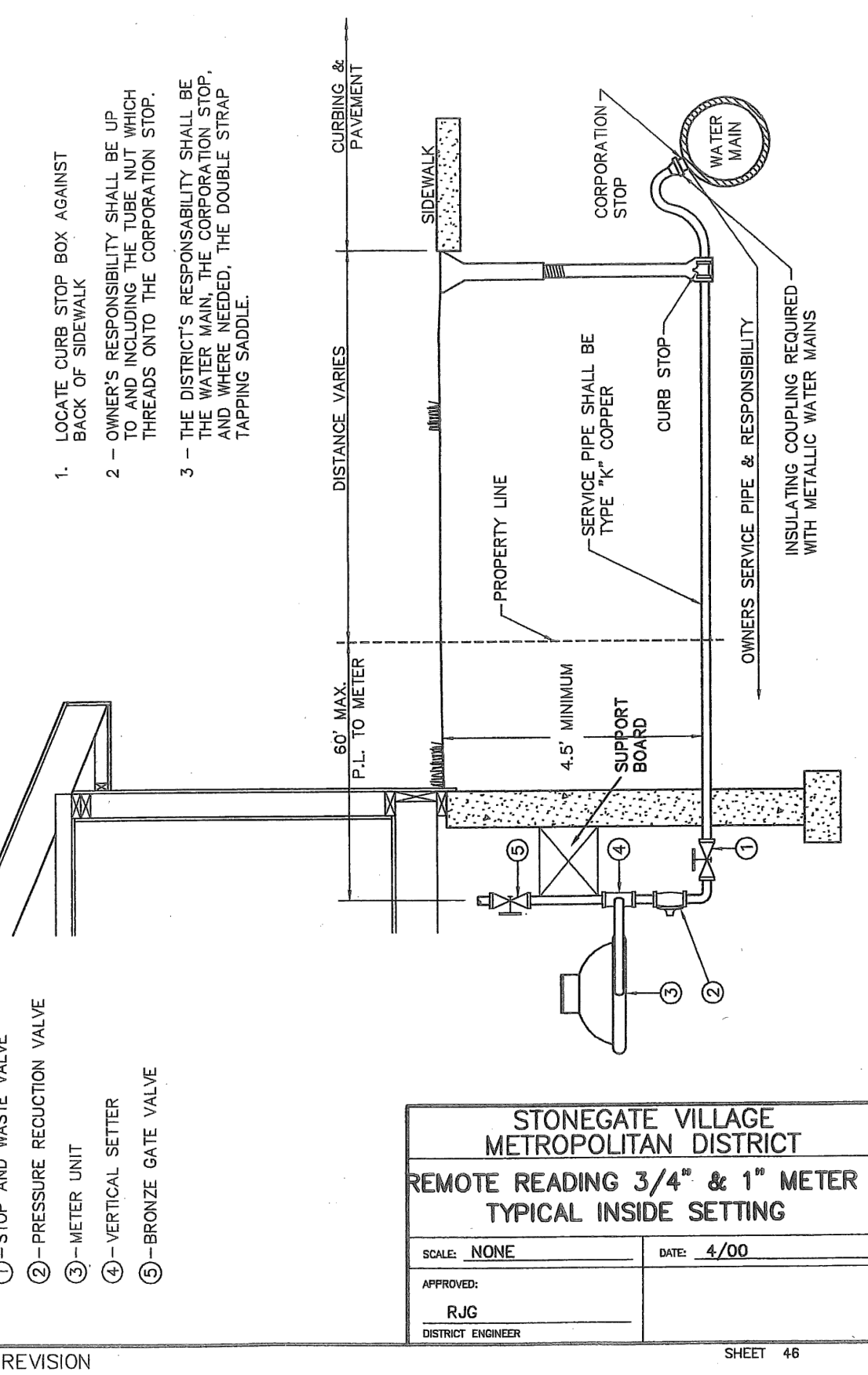
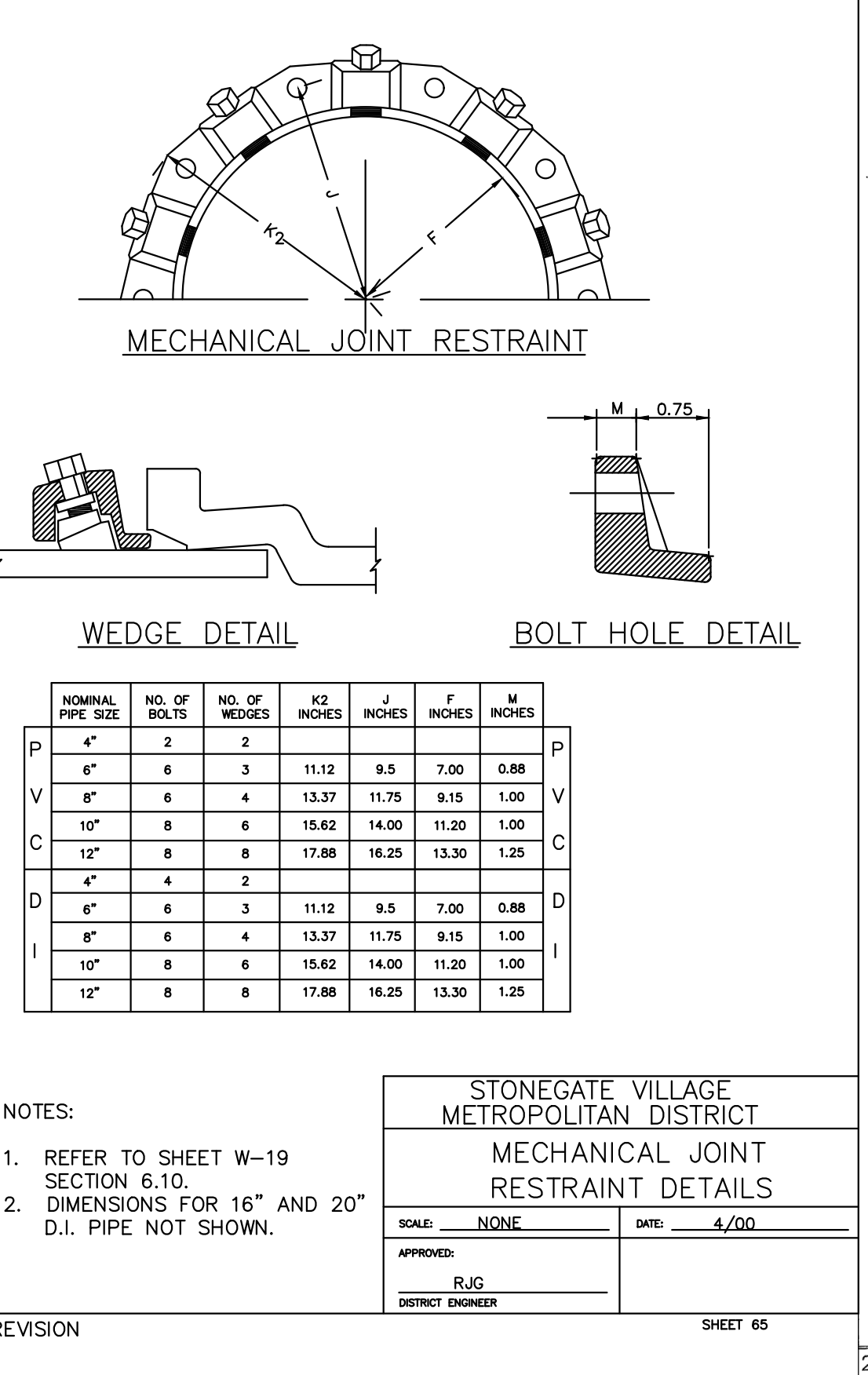
If approved by the District, fines from the trench walls and spoils pile may be used to provide uniform support for the pipe. No rock or stone larger than that allowed by the sieve analysis, or any other detrimental substance, shall be placed closer to the pipe than six inches (6"). Approved bedding materials shall be stockpiled on the jobsite to be used in the event natural materials become unsatisfactory. The District reserves the right to require the use of the specified bedding material at any time.

STONEGATE VILLAGE METROPOLITAN DISTRICT

PIPE BEDDING

SCALE: NONE DATE: 4/00

APPROVED: RJK DISTRICT ENGINEER



Manhard CONSULTING

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Civil Engineering | Surveying & Geospatial Services | GIS | Water Resource Management | Construction Management

PROJ. MGR.: RJM
PROJ. ASSOC.: RAK
DRAWN BY: ASD
DATE: 10/2016

SHEET 14 OF 14
CLCPK3